

& Reichenow, and a note concerning it appeared in this *Bulletin* (vol. 84, no. 9).

On my visit to the British Museum (Natural History) in August, 1964, the specimen was compared with a good series of *Charadrius venustus* and *C. alexandrinus* Linn. and was identified as belonging to the latter species.

Incidentally, the only somewhat similar specimen of Kentish Plover found by me in the British Museum series and which had an incomplete chestnut breast-band was collected at Yaffo, about 100 km. south of Haifa. *Charadrius alexandrinus* breeds in Israel.

My thanks are due to Mr. J. D. Macdonald and to Mr. P. R. Colston of the British Museum for their kind help.

Fieldnotes on the birds of the Santa Cruz Islands, south-west Pacific

by C. J. HADLEY and S. A. PARKER*

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INTRODUCTION

The Santa Cruz Islands are a small group situated in the south-west Pacific east of the Solomon Islands and north of the New Hebrides, and equidistant from the two. With the exception of the Slaty Flycatcher *Mayrornis schistaceus* (q.v.), no fieldnotes on the birds of the group have previously been published, and in most cases the habits and ecology of the non-endemic species are little known.

The following observations were recorded by C.J.H. during three and a half years spent in the group while a forest officer in the service of the government of the British Solomon Islands Protectorate. Most of the observations were made on Vanikoro, especially in the secondary forest surrounding his house at 100 feet above sea level, where a ground-cover of fern and clubmoss grows under a light shade of *Trichospermum* and

Commersonia trees.

Further inland on Vanikoro the terrain becomes more mountainous, developing into a system of steep ridges divided by fast torrents, and the vegetation alternates between the tangle and chaos of recently felled areas and the mossy twilight of three-storied montane rain forest. Here the forest dominants are *Calophyllum* sp., *Camposperma brevipetiolata*, and the hurricane-resisting Kauri Pine, *Agathis macrophylla*, which tends to form clumps in the well-drained situations offered by the crests of ridges (Hadley, 1959). The lowest storey of this forest seems to be particularly the home of the Vanikoro Broadbill and the endemic Slaty Flycatcher. Though these two species could sometimes be found nearer the settlement, the commoner and more conspicuous species there are Golden Whistler, Rufous Fantail and Cardinal Honeyeater.

At about 1,400 feet a stunted form of forest begins, and continues to the summit of Vanikoro at 3,000 feet. Here few birds were seen.

Below the house, by the tidal part of the Lawrence River, lies a cow-pasture inhabited by swamphens and occasional sandpipers. Beyond is a short sand beach, the fringing reef, and miles of coastal mangroves.

The other main islands of the group, namely Ndeni (Santa Cruz),

* Account constructed by S.A.P. from data supplied by C.J.H.

Utupua and Ticopia were all visited, though only on the first was any length of time spent.

Rainfall throughout the group is capricious, with no marked wet or dry season. It is apt to be high, and an average of 233 inches per annum was recorded over a fifteen-year period at the coast on Vanikoro. The only seasonal effect is the alternation between the "South-East season", April–October, and the "North-West season", November–March, in which the trade-wind is weaker. The few references to breeding and young birds (below) indicate that the breeding season on Vanikoro occupies the South-East season (but see the Vanikoro Swiftlet).

Descriptions of the species listed below will be found in Mayr, 1945, though some wader records have been quoted fully as an additional aid to field identification.

Brown Booby (*Sula leucogaster*). On 12th April (1955), a.m., several flocks each of 100+ were seen near Utupua, heading in a W. or N.W. direction.

Little Pied Cormorant (*Phalacrocorax melanoleucos*). Two were seen on the Sundi River, Vanikoro, on 4th April (1957), flying out to sea. Not previously recorded from Vanikoro (Mayr, 1945 : 202).

Mangrove Heron (*Butorides striatus*). Often seen by mangroves on Ndeni and Utupua. One observed in Ndeni on 12th November (1955) had yellow legs and orange feet.

Reef Heron (*Egretta sacra*). Recorded on Vanikoro during March and July, on the Sundi and Lawrence rivers and along the seashore amongst coral and on sand-beaches. Of those recorded, seven were white and one was blue-grey. A white bird was seen on Utupua, 1st November (1955), on a sandspit enclosing a small lagoon.

Grey Duck (*Anas superciliosa*). Seen on Ticopia lake. A single bird was observed flying east between Vanikoro and Utupua on 12th April (1955). Another was seen over the settlement on Vanikoro on 19th April (1957). Ticopia is the only island of the group from which this species has previously been recorded (Mayr, 1945 : 202).

Pied Hawk (*Accipiter albogularis*). Common throughout the Protectorate. On Vanikoro it was tame and often seen in the garden.

Swamphen (*Porphyrio porphyrio*). Common and widespread on Vanikoro, where not previously recorded (Mayr, 1945 : 203). Observed in groups up to 1,400 feet. It prefers the thick cover in secondary forest, *i.e.* where timber has been worked, and was rarely noted in primary forest. It also frequented the low, swampy cow-pasture and the garden, where it would dig up the beans. It has a sharp, short, hoarse cry. One shot on 4th June (1957) weighed 1½ lbs.

Golden Plover (*Pluvialis dominica*). On 23rd October (1955) a party of four birds (two males, one female and one juvenile) was seen on the house lawn, the first time that this species had been noted away from the sea on Vanikoro. Its inland occurrence may have been connected with a recent period of stormy weather (the wind just having dropped), though Mayr (1945 : 37) states that it is to be found more often inland than any other shore bird of the area. The party was put to flight by dives from a Polynesian Triller. On Utupua, 1st November (1955), on a sandspit enclosing

a small lagoon, nine or more of these plovers were seen, near a couple of Turnstones.

Common Sandpiper (*Tringa hypoleucos*). On Vanikoro, 2nd March (1958), two were seen feeding on the freshly-covered reef just around sunset. The fieldnotes read: "Tail jerking, buff on chest, white underneath, white shoulder, dark line through eye and pale above (indistinct), white wing feathers in flight." It was almost certainly this species seen feeding in the tadpole-filled pools of the lowland watermeadows.

Turnstone (*Arenaria interpres*). On Utupua, 1st November (1955), two in winter plumage were observed on a sandspit enclosing a small lagoon. Nearby was a party of Golden Plovers. Another was seen at Napir, on Ndeni, 10th November (1955), amongst rocks by the seashore.

Grey-tailed Tattler (*Tringa incana*). Recorded twice on Vanikoro. On 18th October (1957), one was seen flying up and down the Willi-Willi River, and on 2nd March (1958) a party of six on a sandbank was approached to within 8 feet. The fieldnotes for the latter observation read: "Body jerking regularly. *c.* 8 inches long, slender and graceful. Smooth grey all over except for white belly. Bill of medium length, fairly stout. Eye black with fine white ring all around. Legs dull yellow." On Utupua, 1st November (1955), a lone bird was seen perched on a stump, on a sandspit enclosing a lagoon. Nearby were several Golden Plovers and Turnstones.

Sharp-tailed Sandpiper (*Calidris acuminata*). Recorded once on the shore on Vanikoro, 24th July (1955).

White-headed Stilt (*Himantopus himantopus*). Twice seen on Vanikoro. On 2nd June (1957) two birds flew from inland over the cow-pasture in the direction of the Lawrence River. Their white bodies, black pointed wings, black collars, long trailing reddish legs and strong tern-like flight were noted. Conditions were overcast and very gusty. Eleven days later the weather was fine and there was a neap tide. Two stilts were seen at the river mouth. One bird was slightly taller than the other and not so pure about the head. In the south-west Pacific only New Britain has previously been recorded for this species, whose nearest breeding grounds are in Australia (Mayr, 1945 : 46).

White-capped Noddy (*Anous tenuirostris*). A sooty bird with a white crown was seen at the Sundi River landing on 28th March (1958), perched on a log in the water.

Green-winged Ground Pigeon (*Chalcophaps indica*). Only one record, on Vanikoro, of a bird seen flying into secondary forest from a small forest nursery on 11th June (1955).

Pacific Pigeon (*Ducula pacifica*). Only seen twice on Vanikoro, on 14th August (1955) and 15th June (1958).

Barn Owl (*Tyto alba*). A barn owl was once seen on Vanikoro.

Glossy Swiftlet (*Collocalia esculenta*). A specimen was taken on Vanikoro on 3rd June (1958).

Vanikoro Swiftlet (*Collocalia vanikorensis*). Mayr (1945 : 76) states that the nest and nest-location of this species are insufficiently described. These swiftlets were found breeding on Ndeni on 2nd January (1956). The colony was in the limestone cave of an underground river, and was a quarter of a

mile from daylight. The nests were on the walls of the cave, which was also occupied by a great number of bats of several species, amongst them the species *Emballonura raffrayana*. A juvenile and adult swiftlet were collected; the adult was asleep on its nest and did not wake up until after night had fallen, several hours after its capture.

White-collared Kingfisher (*Halcyon chloris*). Common on Vanikoro, where recorded from mangroves and gardens. It has a harsh cry.

Polynesian Triller (*Lalage maculosa*). Often seen in lowland forest and secondary growth on Vanikoro, generally in twos and threes, at treetop height. It uses conspicuous perches. The call is a single note, "tchip", sometimes repeated. A party of four Golden Plovers (*q.v.*) was once put to flight from the house lawn by bold dives from a triller. On 18th June (1954), while bush was being cleared from a knoll at 100 feet, a nest was found about 20 feet up in a small tree. It was subsequently deserted and found to contain one heavily incubated egg, 0.9 inches in length and blue-green with brown markings concentrated at the large end.

Rufous Fantail (*Rhipidura rufifrons*). The commonest small bird on Vanikoro, found in plantation strips, secondary and primary forest up to 1,500 feet, generally foraging in the substage and midstage with other small birds. The close social relationship between this species and *Mayrornis schistaceus* has already been mentioned (Parker, 1963). Apart from an excited twittering, heard when the fantail was with this flycatcher, the voice includes a descending fairy-like trilling song. An immature bird was seen on 14th June (1958).

Slaty Flycatcher (*Mayrornis schistaceus*). The habits of this species have been noted elsewhere (Parker, 1963). It remains to add that the first nest referred to there was built and used during a period of very wet weather, and was situated in a plantation consisting of lines thirty feet apart cut through the forest and planted with kauri saplings. The nest was on the edge of one of these lines.

Vanikoro Broadbill (*Myiagra vanikorensis*). A shy species often seen on Vanikoro in lowland forest and plantation strips, though preferring primary growth. Observed singly and in pairs, frequently in feeding parties with other small birds (*Pachycephala*, *Myzomela*, *Mayrornis*, *Rhipidura*), mainly in the lowest stage of the forest but also at treetop height. It was noted as darting from its perch to catch insects and returning to the same perch. It repeatedly jerks the tail downwards when perched. The call is a harsh, metallic grating note, "tzk, tzk", also a "see-saw" note. A nest was found on 26th May (1957) in secondary growth near a stream, about 10 feet up in a fork of a slender sloping tree. It was of the same size and appearance as the nest of *Mayrornis schistaceus* found on 3rd June (1955) (Parker, 1963), and was decorated similarly with pieces of fungus skin. Both sexes were taking turns to incubate at quite frequent intervals. On leaving the nest the male appeared to stand up or stretch forward horizontally, beating his wings until he became airborne. By 10th June, however, the nest was deserted. A young bird was seen on 14th June (1958).

Golden Whistler (*Pachycephala pectoralis*). A common and conspicuous bird on Vanikoro, found equally in secondary growth (including the edges of gardens) and virgin forest up to 1,500 feet. It is the chief songbird of the island, its sweet liquid notes being especially noticeable at dawn. Often

seen, in family groups and in association with *Mayornis Myiagra*, *Myzomela* and *Rhipidura*. A female was seen feeding an adult-sized young in a thicket on 15th November (1954). The young was continually fanning its wings, while nearby another young whistler was feeding at ground level and making a chucking noise. On 11th June (1955) in secondary forest a female and young were seen foraging near ground level. In both instances the males were observed nearby in the treetops. On 24th July (1955) a female was seen taking food to a large fledgeling perched about 14 feet above ground amid dense foliage in the forest. The fledgeling was shivering its right wing and cheeping, and its agitation increased as the female approached. On 14th June (1958) territorial behaviour was observed. Two males were singing at each other across a path through a plantation when a third male attacked one of them and all three flew off into the plantation. A female or young bird was in the background. The three males remained nearby singing. The song of this species may be rendered as "weet-weet-weet-tu-weet'le tu weet u," also a low husky "tu tu tu tu weet u" and variants. An individual in a feeding party gave a defiant sound, like a clockwork car unwinding rapidly. Dawn duetting also occurs. A whistler often seemed to be with the party during surveys in the forest, singing from just ahead or nearby; possibly the party passed from one bird's territory to another's.

Cardinal Honeyeater (*Myzomela cardinalis*). A common bird of gardens, plantations and secondary forest on Vanikoro, twice observed in virgin kauri forest at 700 feet and 1,500 feet. Seen singly or in pairs, often in feeding parties with the other small birds (*Pachycephala*, *Mayornis*, *Rhipidura*, *Myiagra*). One was seen hovering to catch an insect. The call is "a single note consisting of several notes together".

I. C. J. Galbraith (pers. comm.) comments that on San Cristoval and Ugi in the eastern Solomons he found this species mainly along the shore among coconut palms, where it was so common that pairs could not be distinguished and the birds seemed to chase each other at random. On these islands this honeyeater was much commoner than *Rhipidura rufifrons*, while on Vanikoro the fantail is the commonest small bird.

Rusty-winged Starling (*Aplonis zelandicus*). Infrequently seen on Vanikoro, in plantations and the midstage of the lowland forest (once thought to have been seen at 1,500 feet), sometimes singly, though once in a flock of at least a dozen. They are rather dumpy, thrush-sized birds with short tails and flattish heads. Apart from the sharp tappings of their beaks on the tree trunks (feeding or excavating? No details) they were quiet, even secretive. They twist their heads around a lot.

The shy and secretive manner of this species recalls that of *A. santovestris* of Espiritu Santo, New Hebrides (Harrison and Marshall, 1937 : 149) and the related *A. pelzelni* of Ponape (Baker, 1951 : 299), both reported as nesting in cavities in trees. As *A. zelandicus* is capable of administering audible blows to tree trunks with its bill, does it, like the Celebes starling *Scissirostrum dubium*, excavate nestholes?

CENSUS

On 14th June (1958) a rough census was carried out of a six-acre plantation beside a stream. The area comprised plantation strips and relict primary undergrowth. In one main feeding party and one smaller associa-

tion were counted 5–6 *Pachycephala pectoralis*, including two juveniles, three *Myiagra vanikorensis*, including one juvenile, three *Rhipidura rufifrons*, two *Mayrornis schistaceus* and two *Myzomela cardinalis*, one a juvenile. Two and three *Lalage maculosa* were not associated with either party. Total number of individuals seen was 20–21.

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On the Red-headed Quelea, *Quelea erythrops* (Hartlaub) in Zambia

by A. J. TREE

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Distribution. Scattered records from all provinces north of about 14° S., except on the Kafue where recorded to at least 16° 45' S. and from Kalabo, in Barotseland, at 15° 00' S. Appears to be confined to water during the breeding season, most records coming from the upper Zambesi, Kabompo and Kafue Rivers, Mweru Marsh and Lake Tanganyika, and records from other localities close to the Luapula and Chambeshi Rivers from which they had probably wandered. Recorded only once from the Luangwa River.

Status on the Kafue River. Virtually all my observations have been made on the Kafue though I think that most comments from there would apply to the Zambian population as a whole.

Appears to be very common from near the south-east corner of the Kafue National Park at 16° 45' S., 26° 08' E. upstream as far as the swamps and floodplains in the area of the Kafue/Luswishi confluence (13° 55' S., 27° 25' E.) with lesser numbers to Ndubeni (13° 24' S., 27° 49' E.) and very few on the Copperbelt, in fact is probably only on passage there. Flocks of up to 300 have been noted at Ndubeni in January and flocks of up to 400 totalling some thousands along the Kafue between Mswebi (14° 24' S., 27° 42' E.) and the Kafue/Luswishi confluence in late January and February. The large numbers were localised, however, to Mswebi, the Kafue/Lukanga confluence (14° 22' S., 27° 11' E.), Supuni Ferry and about five miles upstream (14° 18' S., 27° 16/21' E.), and the Kafue/Luswishi confluence together with the adjoining Chanya Swamp.

Breeding. Few definite breeding records have been published to date, see Benson (1956) for breeding at Mpulungu on Lake Tanganyika, and Benson and White (1959) for breeding at the southern extremities of its range on the Kafue.

On the 4th February, 1961, at Kasha in the Kafue National Park